SDMS US EPA REGION V -1

SOME IMAGES WITHIN THIS DOCUMENT MAY BE ILLEGIBLE DUE TO BAD SOURCE DOCUMENTS.

DRAFT SUBMITTED
CHANGE
153452

WORKSHEET FOR HAZARDOUS WASTE
SITE RANKING MODEL

FIT QUALITY ASSURANCE TEAM

GENERAL

Site name and location: CAHOKIA / DEAD CREEK
ST CLAIR CO

Date(s) of site scoring: 12/14/81 & 4/29/82

Primary source(s) of information (e.g., EPA region, state, FIT, etc.):

--- EPA FILES -
--- "Preliminary Hydrogeologic Investigation in the Northern Portion of Dead Creek & Vicinity" → 4/81 R. St. John.

Factors not scored (assigned 0 for additive and 1 for multiplicative) due to insufficient information:

Waste Quantity

Comments or qualifications:

Not scoring groundwater

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GROUND WATER PATHWAY

[1] Measured Level or Evidence of Release

Describe substance(s) and nature of release:

PCBs
Dichlorobenzene
Chloroethene

Describe method of measurement or observation:

Lab Analysis in report "A Preliminary Hydrogeologic Investigation in the Northern Portion of Dead Creek and Vicinity" by Ron St. John - 4/81
pages 21-39

[2] Depth to Aquifer of Concern

Describe/name aquifer of concern:

Why is above aquifer of concern?

Depth and how determined, including sources:

Net Precipitation

Net precipitation and how determined, including source(s):

Permeability of Unsaturated Zone

Soil type(s) in unsaturated zone:

Permeability and how determined, including source(s):

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[3] Containment

Method of waste management (e.g., surface impoundment, landfill, etc) of extreme case:

Describe basis for selecting extreme case:

Describe method(s) of waste or leachate containment for above extreme case:

Cite source(s) of information:

[6] Physical State

Physical state of waste and source of information:

per [illegible] report previously cited.

Persistence

Most persistent compound subject to transport via ground water:

PCB

Basis for selecting compound, including source(s):

Analysis of water & soil samples showed PCB to be [illegible] as per report previously cited.

Basis for selecting persistence rating score:

Max for base rating.

Toxicity/Infectiousness

Toxic materials subject to transport via ground water and Sax or NFPA level for each:

PCB -- Sax level [illegible]

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Cite source(s) of information indicating toxics present on site:

[illegible] previously cited and lab analysis reports.

Infectious materials present on site and source(s) of information:

—

Basis for selecting CDC classification of infectious materials:

—

[7] Total Waste Quantity

Total waste quantity present, including unit of measurement (e.g., tons, cubic yards drums):

UNKNOWN?

Basis for estimating or computing quantity, including source(s) of information:

[8] Ground Water Use

Use(s) of aquifer of concern and source(s) of information:

INDUSTRIAL USE — ILLINOIS WATER SURVEY

Distance to Nearest Well Downgradient

Distance to nearest well downgradient:

Adjacent. [illegible] CONTAMINATED WELL

How was downgradient direction(s) established, including source(s) of information:

FOOD [illegible] to SW

How was distance determined?:

Is nearest building known to be using ground water? Source of information:

[illegible] nearest [illegible]

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Is nearest well known to be drawing from aquifer of concern? Source of information:

YES. ILLINOIS WATER SURVEY

Population Served by Ground Water Within 3-Mile Radius

Population served with 3-mile radius:

~14

How was population counted or computed, including source(s) of information:

DRINKING WELL WAS DRILLED FOR INDUSTRIAL TRAC SUPPLY E ST. LOUIS 1980 PER ILLINOIS WATER SURVEY

Is population known to be served by aquifer of concern? Source of information:

YES. ILLINOIS WATER SURVEY

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SURFACE WATER PATHWAY

[1] Measured Level or Evidence of Release

Describe substances and nature of release:
Contaminants deposited directly into creek waters - lab analysis of creek downstream and certain company holding ponds show contamination.
Describe method of measurement or observation:
Documented in report of 4/81 previously cited.

[2] Site Slope and Terrain

Computation of slope and description of points of measurement:

Cite source(s) of information (topo maps, etc.):

1-Year 24-Hour Rainfall

Amount of rainfall and source of information:

Distance to Surface Water

Distance and description of points of measurement:

Cite source(s) of information:

Flood Potential

In what flood plain, if any, is the site located?:

Cite source(s) of information:

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[3] Containment

Describe basis for selecting extreme waste management case:

Describe method(s) of waste or leachate containment for extreme case:

Cite source(s) of information:

[8] Surface Water Use

Use(s) of downstream surface water and sources of information:

(2) RECREATION

Critical Habitats

Location and descritpion of downstream critical habitat, if any:

Between 100 yr. & 500 yr. floodplain

Distance and description of points of measurement:

Cite source(s) of information:

USGS -
Stone Mountain

Population Served By Surface Water with Water Intake Within 3 Miles Downstream from Site

Population served by water intake(s): 0

Is surface water within 3 miles in a tidal estuary?: NO

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Description(s) and location(s) of intake(s) and corresponding population served by each:

How was population counted or computed?:

Cite source(s) of water-intake and population information:

Lum's Public Water Supply

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AIR PATHWAY

[1] Evidence of Release

Describe contaminant and monitoring which reveal that background levels have been exceeded?:

[illegible] Chloride ion.

Cite source(s) of information:

Photographs by J. DeSelm (ICPA staff) on 5/2/80 & 5/6/80

[3] Physical State/Volatility

Physical state of waste and source(s) of information:

Liquid -- report previously cited.

Vapor pressure of waste and source(s) of information:

Reactivity

Reactive substances and source(s) of information:

Dichlorobenzene under elevated temp. & pressure. (SAX)

NFPA level for each and basis of selection:

(1) - Flash point of dichlorobenzene is 150°F (SAX)

Incompatability

Incompatible substances which are present and source(s) of information:

[illegible] could react vigorously with oxidizing materials.

Basis for selecting incompatibility score:

Mitre Model Table (p 87)

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[5] Distance to Nearest Population

Distance and description of points of measurement:

WITHIN 1/4 MILE - HOUSES ADJACENT TO CREEK ON THE SOUTHEAST

Cite source(s) of information:

TOPOGRAPHIC MAP (CAHOKIA QUAD).

Population Within 1-Mile Radius

Population and how counted or computed:

>10,000 - TOWNS OF CAHOKIA, CENTREVILLE & DUQUET IN CLOSE PROXIMITY

Cite source(s) of information:

TOPOGRAPHIC MAP & APPLICATION CHART.

Land Use

Location and type of determining land use:

AGRICULTURAL - ADJACENT WEST
INDUSTRIAL - ADJACENT NORTH
RESIDENTIAL - ADJACENT SOUTHEAST

Distance to determining land use: < 1/4 MILE

Cite source(s) of information:

VISUAL OBSERVANCE, IEPA FILES.

CAHOKIA / DEAD CREEK

GW PATHWAY

[8] GW USE (PAGE 4)
- NOT USED - PER REGIONAL MANAGER OF WHAT?
- SOURCE OF INFO. FOR "IS NEAREST BLDG. KNOWN TO BE USING GW?" TO JUSTIFY ASSIGNED RANKING
- SOURCE OF INFO FOR "IS NEARGST WELL KNOWN TO BE DRAWING FROM AQUIFER OF CONCERN?" TO JUSTIFY ASSIGNED RANKING.

[8] POPULATION SERVED BY GW WITHIN 3-MILE RADIUS (PAGE 5)
- "HOW WAS POPULATION COMPUTED - INCLUDING SOURCE OF INFO." TO JUSTIFY ASSINGED RANKING
- SOURCE OF INFO. FOR "IS POPULATION KNOWN TO BE SERVED BY AQUIFER OF CONCERN?" TO JUSTIFY RANKING.

SW PATHWAY

[8] SW USE (PAGE 7)
- INDICATE USE OF DOWNSTREAM SW TO JUSTIFY "2" RANKING
- INDICATE CRITICAL HABITAT, ETC. USE IN ASSIGNING THE "2" RANKING.
- POPULATION SERVED ... (PAGE 8)

  INDICATE SOURCE OF WATER INTAKE & POPULATION; ie- WHO (INFORMATION) TOLD YOU THAT NO POPULATION IS SERVED BY GROUNDWATER

  NOTE: REMEMBER THAT IF SW IS USED AS IRRIGATION WATER, THE ACRES OF LAND IRRIGATED OR GRAZED CAN BE CONVERTED TO POPULATION SERVED (P. 81 OF THE MODEL)

CAHOKIA / DEAD CREEK

NOTES - ① WHERE A PARTICULAR STUDY IS CITED, NOTE PAGE #'S WHERE INFO. IS FOUND

② REMEMBER THAT "PYSICAL STATE" REFERS TO STATE OF THE WASTE AT THE TIME OF DISPOSAL. SO... SHOULD "PHYSICAL STATE" RANKING OF "3" - LIQUID FOR PCB'S BE CHANGED TO A "2" - SLUDGE ? CITE WHERE INFO FOUND

③ CHECK IF WASE QUANITY VALUE REALLY UNKNOWN

④ CHECK → ATTNY. GENERAL OFFICE STATES "PRIOR HISTORY OF SOME AIR POLLUTION IMPACTS (fuming & smoldering)".